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10/560,560	06/23/2006	Ronald Christian Weber	003D.0084.U1(US)	6667

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EXAMINER	
NGUYEN, PHUONGCHI T	
ART UNIT	PAPER NUMBER
2833	
MAIL DATE	DELIVERY MODE
10/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,560	WEBER ET AL.	
	Examiner	Art Unit	
	Phuongchi Nguyen	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 June 2006 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment of July 20, 2007 is acknowledged. It is noted that claims 6 and 7 are amended.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7-10 and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bright et al (US6752663B2).

In regards to claim 1, Bright et al discloses (fig. 3) a shielding cage (122+231) extending along a longitudinal axis between a front side and a rear side (fig. 11) and comprising a diecast metal section (231) (col. 12, lines 3-5) extending from the front side over a first length (of 231) along the longitudinal axis characterized by a sheet metal section (122) (fig. 13) extending from the rear side towards the front side over a second length (of 122) along the longitudinal axis, the first length (of 231) being substantially shorter than the second length (of 122).

In regards to claim 7, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the sheet metal section (122) comprises SMT tails (142) for mounting the sheet metal section (122) to a circuit board (106).

In regards to claim 8, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the sheet metal section (122) comprises SMC tails (142) for mounting the sheet metal section (122) to a circuit board (106) comprising means (holes 144) for engaging with the SMC tails (142)(fig. 1).

In regards to claim 9, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) and the sheet metal section (122) comprise structures (446, 450) for engaging the diecast metal section (231) with the sheet metal section (122).

In regards to claim 10, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) comprises positioning elements (450) for placing the sheet metal section (122) with respect to the diecast metal section (231).

In regards to claim 14, Bright et al discloses (fig. 3) the diecast metal section (231) for use in a shielding cage (122+231).

In regards to claim 15, Bright et al discloses (fig. 3) the sheet metal section (122) for use in a shielding cage (122+231).

In regards to claim 16, Bright et al discloses (fig. 3) the Electrical board connector (150) comprising a header assembly (104) and a shielding cage (122+231)(fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al (US6752663B2).

In regards to claims 2-3, Bright et al disclose the invention generally all as claim, but does not show the ratio of the first length (of 231) to the second length (of 122) to be in the range 1:3 to 1:6 or 1:4 to 1:5. It would have been obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length to the second length of Hwang et al to be in the range 1:3 to 1:6 or 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller, 105 USPQ 233.*

6. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al (US6752663B2) in view of Carey, II et al (US6858322B2).

In regards to claims 11, 12 and 13, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) is a diecast zinc section (col. 12, lines 3-5) and the sheet metal section (122) is a sheet conductive section (col. 4, lines 54-55). Bright et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Bright et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

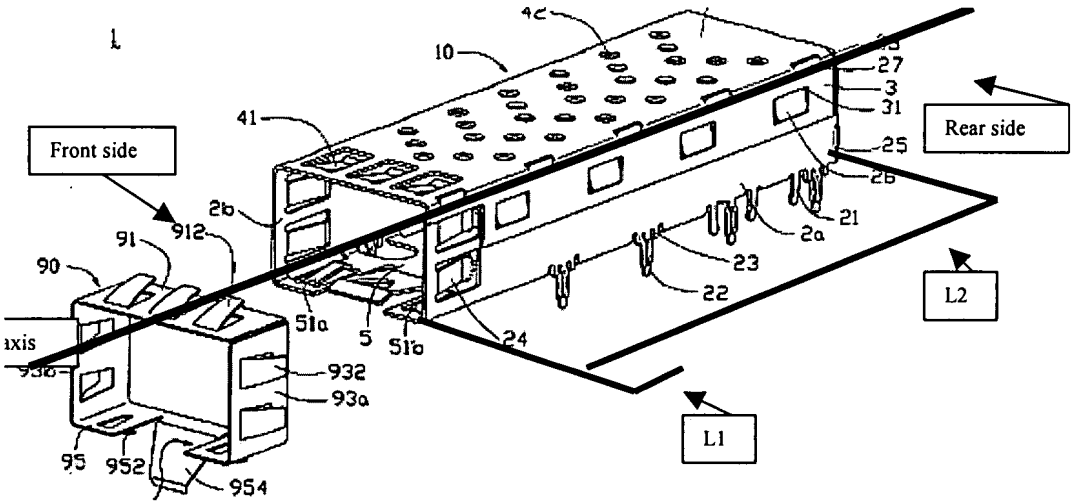
7. Claims 1-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331).

In regards to claim 1, Hwang discloses a shielding cage (10+90) extending along a longitudinal axis between a front side and a rear side (see marked-up below) and comprising a metal section (section of element 90) extending from the front side over a first length (L1) along the longitudinal axis characterized by a sheet metal section (section of element 10) extending from the rear side towards the front side over a second length (L2) along the longitudinal axis, the first length (L1) being substantially shorter than the second length (L2). Hwang discloses the invention generally all as claimed, but does not show the diecast metal section. However, Goodman et al teaches a diecast metal section (32) (col. 2, line 55) is over the sheet metal section (24) (col. 2, line 68) and (col. 3, lines 13-15) (fig. 1). It would have been obvious to one having ordinary skill at the time the invention was made to modify the metal section of Hwang et al by having the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the shell metal section at one end and the mating connector at another end.

In regards to claim 2, Hwang discloses the shielding cage (10+90) wherein the ratio of the first length (L1) to the second length (L2) is in the range 1:3 to 1:6.

In regards to claim 3, Hwang discloses the invention generally all as claim, but does not show the ratio of the first length (L1) to the second length (L2) to be in the range 1:4 to 1:5. It would have been obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length (L1) to the second length (L2) of Hwang et al to be in the range 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller, 105 USPQ 233.*

In regards to claims 4-6, Hwang discloses the invention generally all as claim, but does not have mounting tails on the metal section. However, Hwang, himself, has the mounting tails (22, 23, 232, 222, 21, 212) for mounting the sheet metal section (section of element 10) to a circuit board (300); the mounting tails (22, 23, 232, 222, 21, 212) are solid integrated mounting tails of the metal section (section of element 10), and the mounting tails (22, 23, 232, 222, 21, 212) are pin tails (fig. 5). It would have been obvious to one having ordinary skill at the time the invention was made to provide additional mounting tails from the teaching of the mounting tails of the sheet metal section to the metal section of Hwang for increasing the good connecting between the metal section to the circuit board by itself.



In regards to claim 7, Hwang discloses the shielding cage (10+9) wherein the sheet metal section (section of element 10) comprises SMT-tails (22) for mounting the sheet metal section (section of element

10) to a circuit board (300)(fig. 6).

In regards to claim 8, Hwang discloses the shielding cage (10+9) wherein the sheet metal section (section of element 10) comprises SMC tails (22, 23) for mounting the sheet metal section (section of element 10) to a circuit board (300) comprising means (soldering portion) for engaging with the SMC tails (22, 23) (col. 5, lines 11-12).

In regards to claim 9, Hwang discloses the shielding cage (10+9) wherein the metal section (section of element 90) and the sheet metal section (section of element 10) comprise structures (912) for engaging the metal section (section of element 90) with the sheet metal section (section of element 10) (fig. 1).

In regards to claim 10, Hwang discloses the shielding cage (10+9) wherein the metal section (section of element 90) comprises positioning elements (954) for placing the sheet metal section (section of element 10) with respect to the metal section (section of element 90).

In regards to claim 14, Hwang discloses the shielding cage (10+9) wherein the metal section (section of element 9) for use in a shielding cage (10+9).

In regards to claim 15, Hwang discloses the shielding cage (10+9) wherein the sheet metal section (section of element 10) for use in a shielding cage (10+9).

In regards to claim 16, Hwang discloses the shielding cage (10+9) wherein the electrical board connector (1) comprising a header assembly (electric components inside the body of 1) and a shielding cage (10+9)(fig. 11).

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331) applied as claim 1 and 12 above, and further in view of Carey, II et al (US6858322B2).

In regards to claims 11, 12 and 13, Hwang discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to

be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Hwang by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

9. Claims 1-6, 8-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US6926557B1) in view of Goodman et al (US5037331).

In regards to claim 1, Yamaguchi et al discloses a shielding cage (20+30) extending along a longitudinal axis between a front side and a rear side and comprising a metal section (section of element 20) extending from the front side over a first length along the longitudinal axis characterized by a sheet metal section (section of element 30) extending from the rear side towards the front side over a second length along the longitudinal axis, the first length being substantially shorter than the second length (fig. 4). Yamaguchi et al discloses the invention generally all as claimed, but does not show the diecast metal section. However, Goodman et al teaches a diecast metal section (32) (col. 2, line 55) is over the sheet metal section (24) (col. 2, line 68) and (col. 3, lines 13-15) (fig. 1). It would have been obvious to one having ordinary skill at the time the invention was made to modify the metal section of Yamaguchi et al by having the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the shell metal section at one end and the mating connector at another end.

In regards to claim 2, Yamaguchi et al discloses the shielding cage (20+30) wherein the ratio of the first length to the second length is in the range 1:3 to 1:6.

In regards to claim 3, Yamaguchi et al discloses the invention generally all as claim, but does not show the ratio of the first length to the second length to be in the range 1:4 to 1:5. It would have been obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length to the second length of Yamaguchi et al to be in the range 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or

workable ranges involves only routine skill in the art. In *re Aller, 105 USPQ 233.*

In regards to claim 4, Yamaguchi et al discloses the metal section (20) comprises mounting tails (24a) for mounting the metal section (of 20) to a circuit board (fig. 1).

In regards to claim 5, Yamaguchi et al discloses the mounting tails (24a) are solid integrated mounting tails of the metal section (24).

In regards to claim 6, Yamaguchi et al discloses the mounting tails (24a) are PIP-tails.

In regards to claim 9, Yamaguchi et al discloses the metal section (20) and the sheet metal section (30) comprise structures (front end of 30, that engages to 20) for engaging the metal section (of 20) with the sheet metal section (of 30).

In regards to claim 10, Yamaguchi et al discloses the metal section (20) comprises positioning elements (sidewall 24) for placing the sheet metal section (30) with respect to the metal section (20) (fig. 8).

In regards to claim 14, Yamaguchi et al discloses the metal section (20) for use in a shielding cage (20+30).

In regards to claim 15, Yamaguchi et al discloses the sheet metal section (30) for use in a shielding cage (20+30).

In regards to claim 16, Yamaguchi et al discloses the Electrical board connector comprising a header assembly (of body 10) and a shielding cage (20+30).

10. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US6926557B1) in view of Goodman et al (US5037331) applied as claim 1 and 12 above, and further in view of Carey, II et al (US6858322B2).

In regards to claims 11, 12 and 13, Yamaguchi et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious

to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Yamaguchi et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

11. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PCN

September 26, 2007

NEIL ABRAMS
PRIMARY EXAMINER